UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,070	11/21/2006	Hiroyuki Ochiai	283236US2XPCT	9860

22850 7590 03/10/2009

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
WYSZOMIERSKI, GEORGE P	

ART UNIT	PAPER NUMBER
1793	

NOTIFICATION DATE	DELIVERY MODE
03/10/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/560,070	OCHIAI ET AL.	
	Examiner	Art Unit	
	George P. Wyszomierski	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/18/08 (Election)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-41* is/are pending in the application.

4a) Of the above claim(s) *36-41* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/7/06,9/22/08,10/20/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Applicant's election of Group I, claims 22-35 in the paper filed December 18, 2008 is acknowledged. As no reasons for traversal are stated, the election is being treated as an election without traverse.

2. Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 1 of this claim, "the hard electrode" lacks proper antecedent basis.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 22, 30, 31, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dzugan et al. (U.S. Patent 5,071,054) in view of Brown et al. (U.S. Patent 6,417,477).

Dzugan discloses casting a gas turbine engine component and, with reference to Fig. 3 of Dzugan, removing a casting defect **34** from the component to form a recessed portion **40**, and filling this recessed portion with a filler metal. With regard to claim 30, defects in the filler are smoothed as by surface grinding; see Dzugan column 3, lines 65-66. With regard to claim 35, the examiner's position is that this process forms a metal product in accord with the instant claim.

Dzugan does not disclose filling the recess by the electric spark machine process as recited in the instant claims. Brown indicates that it was known in the art, at the time of the invention, to form a deposit on a gas turbine engine component by an electric spark machine process. The actual materials used by Dzugan and Brown may be the same; compare Table II of Dzugan and column 6, lines 31-35 of Brown. Brown column 10, lines 13-30 further indicates that a smoothing pass of the electrode may be performed to eliminate higher portions of the deposit, in accord with instant claim 31.

Because both Dzugan and Brown are directed to processing substantially the same metallic materials for the same end use, it would have been an obvious expedient to one of ordinary skill in the art to employ the electrospark depositing process of Brown et al. to deposit the filler material in the recesses of Dzugan et al.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dzugan et al. in view of Brown et al., as above, and further in view of Sawyer (U.S. Patent 5,097,586).

Dzugan and Brown do not specify removing a defect by electric spark machining as required by the instant claim. Sawyer indicates that it was known in the art, at the time of the invention, to employ electric discharge machining for the purpose of machining a desired portion of the surface of a superalloy article. Sawyer further indicates the advantages of such a process. Thus, it would have been considered obvious to one of skill in the art to remove the defect of Dzugan by the Sawyer method, when carrying out the combined process as disclosed by Dzugan et al. and Brown et al.

6. Claims 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dzugan et al. in view of Brown et al., and further in view of JP 2000-71126 (reference "AS" on the IDS filed 3/7/2006).

Neither Dzugan nor Brown, discussed supra, specifically recite melting a deposition simultaneous to depositing same, as required by the instant claims. JP '126 indicates the conventionality in the art of electric discharge deposition to melt and deposit the material at the same time. Dzugan and Brown further indicate that the step of depositing material may be repeated a number of times in accord with the last three lines of instant claim 24; see Dzugan column 4, line 16 or the paragraph overlapping columns 9-10 of Brown. Dzugan and Brown further disclose the post deposition heat treatments of instant claims 27 and 29. Thus, the combined disclosures of Dzugan et al., Brown et al., and JP '126 would have taught the claimed process to one of ordinary skill in the art.

7. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dzugan et al. in view of Brown et al., and further in view of SU 1098740.

Dzugan and Brown do not specify the limitations of the deposition electrode as defined in the instant claims. SU '740 indicates that it was known in the art to produce electric spark deposition electrodes by pressing and sintering powders of the desired composition, such as a copper alloy composition. Thus, to employ electrodes as presently claimed in the processes taught by the combination of Dzugan et al. and Brown et al. is seen to be at best an obvious variant of those processes.

8. Claims 22-31 and 33-35 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 64-67 and 69-81 of copending Application No. 10/560,353.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the '353 claims are directed to a process of removing a defect from a cast material, preferably by electric spark discharge, and depositing a material in the removed portion by electric spark discharge. The deposited material may then be machined; see '353 claim 80. Claim 72 of the '353 application indicates that an electrode as defined in instant claim 33 may be used. Claim 76 of the '353 application define products analogous to those of instant claim 35.

While no claim of the '353 application is identical in scope to any of the instant claims, the two sets of claims are directed to substantially the same series of process steps, carried out in the same order and for the same purpose in both instances. Thus, no patentable distinction is seen between the invention as defined in the instant claims and that set forth in the claims of the '353 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claim 32 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 64-67 and 69-81 of copending Application No. 10/560,353 in view of SU 1098740.

The '353 claims do not recite forming electrodes as defined in instant claim 32. SU '740 indicates a method as presently claimed to be conventional in the art of making deposition electrodes. Thus, no patentable distinction is seen between the invention as presently claimed and that of the '353 claims, as modified by the '740 disclosure.

This is a provisional obviousness-type double patenting rejection.

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. The remainder of the art cited on the attached PTO-892 and 1449 forms is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections, supra.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Wyszomierski/
Primary Examiner
Art Unit 1793

GPW
March 3, 2009